CLAIMS:

1. A method of forming an aluminum comprising line having a titanium nitride comprising layer thereon, the method comprising:

forming a first layer comprising at least one of elemental aluminum or an aluminum alloy over a substrate;

forming a second layer comprising an alloy of titanium and the aluminum from the first layer, the alloy having a higher melting point than that of the first layer;

forming a third layer comprising titanium nitride over the second layer; and

forming the first, second and third layers into a conductive line.

2. The method of claim 1 wherein the titanium nitride of the third layer is formed in contact with the second layer.

3. The method of claim 1 wherein an outermost portion of the first layer is deposited at a temperature of at least about 400°C.

4. The method of claim 1 wherein an outermost portion of the first layer is deposited at a temperature of at least about 450°C.

5. The method of claim 1 comprising forming the second layer to have a thickness of from about 50 Angstroms to about 150 Angstroms.

6. The method of claim 1 comprising forming the second layer to have a thickness of from about 100 Angstroms to about 200 Angstroms.

7. The method of claim 1 wherein temperature of at least an outer portion of the first layer is at least about 360°C during forming of the second layer.

8. The method of claim 1 wherein temperature of at least an outer portion of the first layer is at least about 360°C during forming of the third layer.

9. The method of claim 1 wherein the first layer consists essentially of elemental aluminum.

10. A method of forming an aluminum comprising line having a titanium nitride comprising layer thereon, the method comprising:

physical vapor depositing a first layer comprising at least one of elemental aluminum or an aluminum alloy over a substrate;

physical vapor depositing at least one of elemental titanium or a titanium alloy on the first layer and forming therefrom a second layer comprising an alloy of titanium and the aluminum from the first layer, the alloy having a higher melting point than that of the first layer;

physical vapor depositing a third layer comprising titanium nitride over the second layer; and

photopatterning the first, second and third layers into a conductive line.

11. The method of claim 10 wherein the titanium nitride of the third layer is deposited in contact with the second layer.

12. The method of claim 10 wherein the second layer forms during the elemental titanium deposition.

13. The method of claim 10 wherein essentially all the physical vapor deposited titanium alloys with the aluminum of the first layer.

14. The method of claim 10 comprising physical vapor depositing each of the first layer, titanium, and third layer in different deposition chambers of the same processing tool.

15. The method of claim 10 comprising physical vapor depositing the titanium and third layer in the same deposition chamber.

16. The method of claim 10 comprising physical vapor depositing the first layer in two different chambers of the same processing tool, and physical vapor depositing the titanium and third layer in a common chamber of the same processing tool.

17. The method of claim 10 comprising physical vapor depositing the titanium and the third layer in the same deposition chamber without moving the substrate therefrom intermediate the titanium and third layer depositions.

18. The method of claim 10 wherein an outermost portion of the first layer is deposited at a temperature of at least about 400°C.

19. The method of claim 10 wherein an outermost portion of the first layer is deposited at a temperature of at least about 450°C.

20. The method of claim 10 comprising depositing the second layer to have a thickness of from about 50 Angstroms to about 150 Angstroms.

21. The method of claim 10 comprising depositing the second layer to have a thickness of from about 100 Angstroms to about 200 Angstroms.

22. The method of claim 10 wherein the first layer consists essentially of elemental aluminum, an aluminum alloy, or a mixture thereof.

23. The method of claim 10 wherein the first layer consists essentially of elemental aluminum.

24. The method of claim 10 wherein the physical vapor depositing at least one of elemental titanium or a titanium alloy comprises physical vapor depositing elemental titanium.

25. The method of claim 10 wherein temperature of at least an outer portion of the first layer is at least about 360°C during the physical vapor depositing of the elemental titanium.

26. The method of claim 10 wherein temperature of at least an outer portion of the first layer is at least about 360°C during the physical vapor depositing of the third layer.

27. A method of forming an aluminum comprising line having a titanium nitride comprising layer thereon, the method comprising:

in a processing tool, physical vapor depositing a first layer comprising at least one of elemental aluminum or an aluminum alloy over a substrate in a first chamber;

physical vapor depositing at least one of elemental titanium or a titanium alloy on the first layer in a second chamber of the processing tool while at least an outer portion of the first layer is at a temperature of at least about 360°C, and forming therefrom a second layer comprising an alloy of titanium and the aluminum from the first layer in the second chamber during said depositing, the alloy having a higher melting point than that of the first layer;

physical vapor depositing a third layer comprising titanium nitride on the second layer in the second chamber of the processing tool;

removing the substrate from the processing tool after depositing the third layer; and

photopatterning the first, second and third layers into a conductive line.

28. The method of claim 27 wherein essentially all the physical vapor deposited titanium alloys with the aluminum of the first layer.

29. The method of claim 27 comprising depositing the second layer to have a thickness of from about 50 Angstroms to about 150 Angstroms.

30. The method of claim 27 comprising depositing the second layer to have a thickness of from about 100 Angstroms to about 200 Angstroms.

31. The method of claim 27 wherein the first layer consists essentially of elemental aluminum, an aluminum alloy, or a mixture thereof.

32. The method of claim 27 wherein the first layer consists essentially of elemental aluminum.

33. The method of claim 27 wherein the physical vapor depositing at least one of elemental titanium or a titanium alloy comprises physical vapor depositing elemental titanium.

34. The method of claim 27 wherein temperature of at least an outer portion of the first layer is at least about 360°C during the physical vapor depositing of the third layer.

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